1. A method for communicating pulse coded information between low power transceivers which comprises:

spectrally spreading a carrier; and

modulating the spectrally spread carrier with a data pulse code waveform comprising information to be transmitted, to form a modulated spectrally spread (MSS) signal.

2. ~~The method of Claim 1 wherein said spectrally spreading~~ a carrier comprises phase shift keying (PSK) the carrier with a first direct sequence pseudo-random pulse code waveform.

3. The method of Claim 2 wherein said phase shift keying comprises binary phase shift keying (BPSK).

4. The method of Claim 1 wherein said spectrally spreading a carrier comprises generating a frequency hopping signal.

5. The method of Claim 1 wherein said spectrally spreading a carrier comprises generating a time hopping signal.

6. The method of Claim 1 wherein said spectrally spreading a carrier comprises generating a time/frequency hopping signal.

7. The method of Claim 1 wherein said spectrally spreading a carrier comprises generating any FM signal where its modulation bandwidth is greater than said data pulse code waveform's bandwidth.

8. ~~The method of Claim 1~~ wherein said spectrally spreading a carrier comprises generating an FM chirping signal.

9. The method of Claim 1 which further comprises modulating said data pulse code waveform with a second direct sequence pseudo-random pulse code waveform prior to modulating the spectrally spread carrier.

10. The method of Claim 1 wherein said modulating comprises pulse amplitude modulating and said MSS signal comprises a pulse amplitude modulated spectrally spread signal.

11. The method of Claim 10 which further comprises modulating a second direct sequence pseudo-random pulse code waveform with said MSS waveform.

12. The method of Claim 11 which further comprises:

transmitting said MSS signal,

receiving said MSS signal,

extracting said data pulse code waveform from said MSS signal.

13. The method of Claim 12 wherein said extracting comprises:

removing said spectrally spread carrier from said MSS ~~signal resulting in a received pulse code waveform comprising:~~

said data pulse code waveform ~~and~~

said second direct sequence pseudo-random pulse code waveform;

generating a third direct sequence pseudo-random pulse code waveform substantially similar to and in synchronization with said second direct sequence waveform;

gating said received pulse code waveform with said third direct sequence waveform;

filtering the output of said gating step resulting in an average value representing one of two possible logical values for said data pulse code waveform.

14. The method of Claim 13 wherein said generating a third direct sequence psuedo-random pulse code waveform (DSPPCW) comprises:

transmitting a preamble portion of said MSS signal wherein said data pulse code waveform is non-transitioning,

producing a clock waveform in-sync with said second DSPPCW,

performing a sequential correlation comparison between said received pulse code waveform and each of a plurality of candidate waveforms,

recording the results of each comparison,

chosing the candidate with a highest correlation value as said third DSPPCW.

15. The method of Claim 14 which comprises:

using said clock waveform as a return carrier frequency

source.

16. An apparatus for identifying and tracking the whereabouts of moving bodies around a defined area which comprises:

an interrogating station including a first transceiver;

said first transceiver comprising:

means for generating a carrier,

means for spectrally spreading said carrier,

means for generating a data pulse code waveform, and

means for modulating said carrier with said data waveform resulting in a modulated carrier waveform;

at least one tag associated with one of said bodies,

said tag including a second transceiver,

said second transceiver comprising:

means for extracting said data pulse code waveform from said modulated carrier waveform.

17. The apparatus in Claim 16 wherein said means for spectrally spreading said carrier comprises a means for phase shift keying (PSK) said carrier with a first direct sequence pseudo-random pulse code waveform.

18. The apparatus of Claim 16 wherein said means for phase shift keying comprises binary phase shift keying (BPSK).

19. The apparatus of Claim 16 wherein said means for spectrally spreading comprises a means for generating a frequency hopping

signal.

20. The apparatus of Claim 16 wherein said means for spectrally spreading comprises a means for generating a time hopping signal.

21. The apparatus of Claim 16 wherein said means for spectrally spreading comprises a means for generating a time/frequency hopping signal.

22. The apparatus of Claim 16 wherein said means for spectrally spreading comprises a means for generating any FM signal where its modulation bandwidth is greater than said data waveform's bandwidth.

23. The apparatus of Claim 16 wherein said means for spectrally spreading comprises a means for generating an FM chirping signal.

24. The apparatus of Claim 16 which further comprises means for modulating said data waveform with a second direct sequence pseudo-random pulse code waveform.

25. The apparatus of Claim 24 wherein said means for modulating said data waveform comprises a means for multiplying said data waveform with said second direct sequence waveform.

26. The apparatus of Claim 24 wherein said means for extracting comprises:

means for removing said spectrally spread carrier from said modulated carrier waveform resulting in a received pulse code waveform comprising:

said data pulse code waveform and

said second direct sequence pseudo-random pulse code waveform;

means for generating a third direct sequence pseudo-random pulse code waveform substantially similar to and in synchronization with said second direct sequence waveform;

means for gating said received pulse code waveform with said third direct sequence waveform;

means for filtering the output of said means for gating resulting in an average value representing one of two possible logical values for said data pulse code waveform.

27. The apparatus of Claim 26 wherein said means for generating a third direct sequence psuedo-random pulse code waveform (DSPPCW) comprises:

means for transmitting a preamble portion of said MSS signal wherein said data pulse code waveform is non-transitioning,

means for producing a clock waveform in-sync with said second DSPPCW,

means for performing a sequential correlation comparison between said received pulse code waveform and each of a plurality of candidate waveforms,

means for recording the results of each comparison,

means for chosing the candidate with a highest correlation

~~value as said third DSPPCW.~~

28. ~~The apparatus~~ of Claim 14 wherein said clock waveform ~~provides~~ the source of a return carrier frequency.

add b2

add C2